WHAT IS CLAIMED IS:

1. An electricity meter, including:

an encloseable casing comprising a cover and a baseplate;

electrical connection spades (60,62,64,66) extending through said (14) baseplate and outwardly therefrom for mechanical seating thereof in a mating receptacle; and

(140) a metrology board and resilient (156,154,158) connectors housed within said casing, said metrology board electrically connecting to said spades through said resilient connectors so that said metrology board is connected for producing a signal indicating electricity consumption.

2. An electricity meter as in claim 1, further including mating posts and holes associated with said baseplate and said metrology board for mutual physical connection thereof.

3. An electricity meter as in claim 2, wherein said baseplate has (132,138,152,180) tapered posts and said metrology board defines holes therein to mate with said tapered posts such that said board is supported on said baseplate in a predetermined position relative thereto.

4. An electricity meter as in claim 3, further including weldments such that said baseplate and said metrology board are welded to each other in said predetermined relative position.

5. An electricity meter as in claim 3, further including a coil (134) electrically associated with said spades and physically supported in predetermined relationship to said baseplate, and wherein said metrology board includes a Hall Effect (128) sensor that is positioned relatively adjacent said coil in a

preselected position predetermined by the predetermined positions respectively of said coil and said metrology board relative to said baseplate.

6. An electricity meter as in claim 2, further including:

a chassis supported on said baseplate;

a light source supported on said metrology board and indicative of a signal therefrom; and

a light pipe supported on said chassis and positioned to carry light from said light source to outside said cover.

7. An electricity meter as in claim 2, further including an antenna supported on said metrology board and electrically associated therewith for transmitting through said cover a radio signal corresponding with electricity consumption as determined by said metrology board.

8. An electricity meter as in claim 2, further including a chassis supported on said baseplate.

9. An electricity meter as in claim 8, further including;

a circuit board at least partially supported on said chassis for performing predetermined relatively higher level analysis of electricity consumption; and

a fixed connector interconnecting between said metrology board and said circuit board for electrical connections therebetween and for at least partial mechanical support of said circuit board.

10. An electricity meter as in claim 8, further including an electronic meter display supported on said chassis.

11. An electricity meter as in claim 8, further including a mechanical meter display supported on said chassis.

12. An electricity meter as in claim 1, wherein said resilient connectors comprise a plurality of cantilevered spring connector elements.

13. An electricity meter as in claim 1, further including a main circuit supported on said baseplate and defining an initial opening therein for calibration access to said metrology board during assembly of said electricity meter.

14. An electricity meter as in claim 13, further including a nonremovable bridge clip received in said main circuit initial opening for providing a tamper proof circuit bridge closure to said opening.

15. An electricity meter as in claim 14, wherein said bridge clip further includes exposed terminals to provide continued access to said main circuit for field testing of said electricity meter after assembly thereof.

16. An electricity meter, having:

an enclosure comprising a cover and a baseplate;

spades extending out from said baseplate for being seated in a meter receiving junction box;

a metrology board electrically connected to said spades and capable of producing a signal indicating electricity consumption; and

a circuit board mounted within said enclosure and electrically connected to said metrology board, said circuit board providing selected customized features for said electricity meter beyond said metrology board electricity consumption signal.

17. A meter as in claim 16, further including a fixed connector electrically connecting said circuit board with said metrology board.

18. A meter as in claim 17, further including a snap-fit mounting for said circuit board within said enclosure.

19. A meter as in claim 18, further including a common power supply to provide power to both said metrology board and said circuit board, and wherein said fixed connector includes multiple respective conductors for carrying power from said power supply and for carrying data signals between said metrology board and said circuit board.

20. A meter as in claim 16, further including:

resilient connectors within said enclosure for connecting said spades with said metrology board; and

mating posts and holes associated with said baseplate and said metrology board for mutual physical connection thereof.

21. A meter as in claim 20, further including:

a coil electrically connected with said spades and supported by said baseplate within said enclosure; and

a Hall Effect sensor carried on said metrology board such that said mating posts and holes selectively align said coil and Hall Effect sensor for metrology operations.

22. A meter as in claim 20, wherein said baseplate includes said mating posts, and said meter further includes

a chassis having formed connector holes and mounted on said baseplate mating posts; and

a meter display mounted on said chassis.

23. A meter as in claim 22, wherein said cover is an at least partially opaque inner cover connectable with said baseplate, and wherein said meter further includes an at least partially transparent outer cover received about said inner cover and connectable with said baseplate such that said meter display is visible through said outer cover.

24. A meter as in claim 16, further including:

a main circuit supported on said baseplate and defining an opening therein for calibration access to said metrology board and said customized features circuit board during assembly of said electricity meter; and

a non-removable bridge clip received in said main circuit opening for providing a tamper proof circuit bridge thereto.

25. An electricity meter, having:

an enclosure comprising a cover and a baseplate having tapered mounting posts;

spades extending out from said baseplate for insertion into a meter receiving receptacle;

(140) a metrology board having holes mating with said tapered posts for mounting said metrology board on said baseplate, and resilient connectors electrically connecting said metrology board to said spades such that said metrology board is capable of producing a signal indicating electricity consumption;

(162) a circuit board mounted within said enclosure; and

(164) a fixed connector electrically connecting said metrology board to said circuit board.

26. A meter as in claim 25, further including an antenna within said enclosure supported for transmitting through said cover a radio signal corresponding to electricity consumption as determined by said metrology board.

27. A meter as in claim 25, wherein said fixed connector includes multiple conductors for carrying data and power signals between said metrology board and said circuit board.

28. A meter as in claim 25, further including:

a chassis supported on said baseplate;

? a light source supported on said metrology board; and

a light pipe supported on said chassis and positioned to carry light from said light source to outside of said cover.

29. A meter as in claim 28, wherein:

said chassis further defines mating connector holes matching with said baseplate tapered posts; and said meter further includes

a coil electrically associated with said spades; and

a Hall Effect sensor electrically associated with said metrology board and operatively interactive with said coil for sensing electricity consumption, with said coil and said sensor aligned in predetermined positions as determined by said baseplate tapered mounting posts and said metrology board mating holes.

30. A meter as in claim 25, wherein said circuit board includes selected customized metrology features beyond said metrology board electricity consumption signal.

31. A meter as in claim 25, further including:

a chassis defining mating connector holes and mounted therewith on said baseplate tapered mounting posts; and

a meter display mounted on said chassis; wherein said metrology board, said circuit board, said fixed connector, said chassis and said meter display are all secured in snap-fit arrangements.

32. A meter as in claim 31, wherein said cover is an at least partially opaque inner cover connectable with said baseplate, and wherein said meter further includes an at least partially transparent outer cover received about said inner cover and connectable with said baseplate such that said meter display is visible through said outer cover.

33. A meter as in claim 25, further including:

a main circuit supported on said baseplate and defining an opening therein for calibration access to said metrology board and said customized features circuit board during assembly of said electricity meter; and

a non-removable bridge clip received in said main circuit opening for providing a tamper proof circuit bridge thereto.

34. An electricity meter, having:

an enclosure comprising a cover and a baseplate;

spades extending out from said baseplate for insertion into a meter box receptacle;

a basic metrology board electrically connected to said spades and capable of metering electricity consumption;

a circuit board for predetermined additional metrology features, mounted within said enclosure and electrically connected to said metrology board; and

an antenna supported on one of said metrology board and said circuit board for transmitting through said cover a radio signal corresponding with metrology data from at least one of said boards.

35. A meter as in 34, further including a power supply connected to provide power to both said metrology board and said circuit board.

36. A meter as in claim 35, further including a fixed connector electrically connecting said metrology board to said circuit board and including plural conductors for carrying both data and power signals between said metrology board and said circuit board.

37. A meter as in claim 34, further including a chassis supported on said baseplate, a light source supported on said metrology board, and a light pipe positioned on said chassis so as to carry light from said light source to outside said cover.

38. An electricity meter, comprising:

an enclosure with a baseplate and a cover without any metal elements;

spades extending from said baseplate for electrical contact of said meter with main power by insertion of said spades into an electricity meter junction box receptacle;

a metrology board electrically connected with said spades and capable of metering electricity consumption; and

an antenna supported on said metrology board for transmitting directly therefrom through said cover a radio signal corresponding with electricity consumption as metered by said metrology board.

39. An electricity meter as in claim 38, further including:

a circuit board for additional metrology features, mounted within said enclosure

a common power supply within said enclosure for both said metrology board and said circuit board; and

a fixed connector at least partially physically supporting said circuit board and electrically connecting said circuit board with said metrology board using multiple conductors for carrying both data and power signals between said boards.

40. An electricity meter as in claim 38, further including a chassis snap-mounted on said baseplate, a light source supported on said metrology board, and a light pipe positioned on said chassis in relation to said light source so as to carry light therefrom to outside of said cover.

41. An electricity meter as in claim 38, further including:

a meter display supported within said enclosure in a snap-fit arrangement; and

an at least partially transparent outer cover received about said inner cover for protection of enclosed components while permitting viewing of said meter display.

42. A modular electricity meter with multiple components selected from alternatives and assembled with snap fit and interlocking arrangements, comprising:

an encloseable casing having a common baseplate with plural mounting posts and an inner cover removably interconnected thereto;

a plurality of electrical connection mounting spades extending from said casing through said baseplate and outwardly therefrom, for mechanical seating thereof in an electricity meter junction box receptacle;

a basic metrology board, defining mounting holes therein for mating with said baseplate mounting posts for support of said basic metrology board within said casing in a predetermined relationship with said baseplate;

a plurality of resilient connectors received within said casing and electrically connecting between said basic metrology board and said spades so that said basic metrology board is connected for producing a signal indicating electricity consumption at the junction box receptacle with which said electricity meter is associated;

a circuit board received within said casing and electrically connected with said basic metrology board, said circuit board providing selected customized features for said electricity meter beyond said basic metrology board electricity consumption signal;

a common power supply received within said casing for providing power to both said basic metrology board and said circuit board;

a fixed connector extending between said basic metrology board and said circuit board, for at least partially mechanically supporting said circuit board, said fixed connector including multiple respective conductors for carrying between said basic metrology board and said circuit board both data from said respective boards and power from said common power supply;

a support chassis, defining mounting holes therein for mating with said baseplate mounting posts for support of said chassis within said casing in a predetermined relationship with said baseplate;

a meter display mounted in snap fit arrangement supported in fixed relation to said support chassis;

a coil electrically associated with said spades and physically supported in predetermined relationship to said baseplate; and

a Hall Effect sensor associated with said basic metrology board and situated in a predetermined position relatively adjacent said coil for electrical sensing interaction therewith, said predetermined position being formed in part by said predetermined relationship between said baseplate and said basic metrology board;

whereby said modular electricity meter establishes predetermined spatial relationships between selected alternative components using snap fit and interlocking arrangements established from said common baseplate.

43. A modular electricity meter as in claim 42, wherein said meter display comprises one of an electronic meter display and a mechanical based meter display.

44. A modular electricity meter as in claim 42, wherein said resilient connectors comprise a plurality of cantilevered spring connector elements, and said meter further includes weldments such that said baseplate and said basic metrology board are welded to one another in said predetermined relationship thereof.

45. A modular electricity meter as in claim 42, further including an at least partially transparent outer cover received over said inner cover for protection of components within said casing, and so that said meter display is visible therethrough.

46. A modular electricity meter as in claim 42, wherein said baseplate mounting posts are tapered, and said mounting holes of said basic metrology board and said support chassis are commonly received thereover but have respectively different sets of diameters so that said basic metrology board and said support chassis are selectively separated from one another along the axial length of said baseplate tapered mounting posts.

47. A modular electricity meter as in claim 42, further including an antenna directly incorporated into one of said basic metrology board and said circuit board for transmitting through said inner cover a radio signal indicating data from at least one of said boards.

48. A modular electricity meter as in claim 42, further including:

? a light source supported on said basic metrology board and indicative of said signal therefrom; and

? a light pipe supported on said support chassis and positioned relative to said basic metrology board so as to carry light from said light source to outside said casing.

49. A modular electricity meter as in claim 42, further including a main circuit supported on said baseplate and defining an initial opening therein for calibration access to said basic metrology board and said circuit board during assembly of said electricity meter.

50. A modular electricity meter as in claim 49, further including a nonremovable bridge clip received in said main circuit initial opening for providing a tamper proof circuit bridge closure to said opening.

51. A modular electricity meter as in claim 50, wherein said bridge clip further includes exposed terminals to provide continued access to said main circuit for field testing of said electricity meter after assembly thereof.

52. A modular electricity meter as in claim 42, further including additional output means for outputting data from at least one of said basic metrology board and said circuit board using at least one of hardwired transmissions, radio frequency transmissions, pulse outputs, optical link outputs, modem telephone line transmissions and wireless telephone transmissions.

53. Methodology for providing an electricity meter, comprising the steps of:

forming an encloseable casing comprising a cover and a baseplate;

including electrical connection spades situated for extending through said baseplate and outwardly therefrom, and adapted for mechanical seating thereof in a mating receptacle;

providing within said casing a metrology board electrically connected to said spades and capable of producing a signal indicative of electricity consumption; and

further including the steps of housing resilient connectors within said casing and situated for providing said electrical connection between said spades and said metrology board, whereby the assembly of said electricity meter and the formation of said electrical connection between said spades and said metrology board is achieved without requiring the use of individual connectors.

54. Methodology as in claim 53, further including providing respective mating posts and holes associated with said baseplate and said metrology board for mutual physical connection thereof.

55. Methodology as in claim 54, further including providing said baseplate with tapered posts and said metrology board with holes therein which are mated with said tapered posts such that said metrology board is supported on said baseplate in a predetermined position relative thereto.

56. Methodology as in claim 55, further including the step of welding said baseplate and said metrology board together so as to fix them in their relative predetermined position.

57. Methodology as in claim 55, further including:

supporting a coil within said casing electrically associated with said spades and physically supported in predetermined relationship to said baseplate; and

including a Hall Effect sensor on said metrology board positioned relatively adjacent said coil in a preselected position determined by the predetermined positioning respectively of said coil and said metrology board relative to said baseplate.

58. Methodology as in claim 54, further including:

supporting a chassis on said baseplate;

providing a light source supported on said metrology board and indicative of a signal therefrom; and

supporting a light pipe on said chassis and positioned to carry light from said light source to outside said cover.

59. Methodology as in claim 54, further including supporting an antenna on said metrology board and electrically associated therewith for transmitting through said cover a radio signal corresponding with electricity consumption as determined by said metrology board.

60. Methodology as in claim 54, further including:

supporting a chassis on said baseplate;

providing a circuit board within said casing designed for performing predetermined relatively higher level analysis of electricity consumption; and

electrically interconnecting between said metrology board and said circuit board a fixed connector, which also provides at least partial mechanical support of said circuit board.

61. Methodology as in claim 54, further including:

supporting a chassis on said baseplate; and

supporting one of an electronic meter display and a mechanical meter display on said chassis.

62. Methodology as in claim 53, further including supporting a main circuit on said baseplate, which circuit includes an initial opening therein for calibration access to said metrology board during assembly of said electricity meter.

63. Methodology as in claim 62, further including, after assembly of said electricity meter, inserting a nonremovable bridge clip into said main circuit initial opening for providing a tamper proof circuit bridge closure to said opening.

64. Methodology as in claim 63, further including providing exposed terminals on said bridge clip to provide continued access to said main circuit for field testing of said electricity meter after assembly thereof.

65. Methodology for providing an electricity meter, comprising:

providing an enclosure with a baseplate and a cover without any metal elements;

extending spades from said baseplate for electrical contact of said meter with main power by insertion of said spades in an electricity meter junction box receptacle;

providing a metrology board electrically connected with said spades and capable of metering electricity consumption; and

supporting an antenna on said metrology board for transmitting directly therefrom through said cover a radio signal corresponding with electricity consumption as metered by said metrology board.

66. A methodology as in claim 65, including further providing:

a circuit board for additional metrology features, mounted within said enclosure;

a common power supply within said enclosure for both said metrology board and said circuit board; and

a fixed connector at least partially physically supporting said circuit board and electrically connecting said circuit board with said metrology board using multiple conductors for carrying both data and power signals between said boards.

67. A methodology as in claim 65, including further providing a chassis snap-mounted on said baseplate, a light source supported on said metrology board, and a light pipe positioned on said chassis in

relation to said light source so as to carry light therefrom to outside of said cover.

68. A methodology as in claim 65, including further providing:

a meter display supported within said enclosure in a snap-fit arrangement; and

an at least partially transparent outer cover received about said inner cover for protection of enclosed components while permitting viewing of said meter display.

69. Methodology for providing a modular electricity meter with multiple components selected from alternatives and assembled with snap fit and interlocking arrangements, comprising:

providing an encloseable casing having a common baseplate with plural mounting posts and an inner cover removably interconnected thereto;

extending a plurality of electrical connection mounting spades from said casing through said baseplate and outwardly therefrom, for mechanical seating thereof in an electricity meter junction box receptacle;

providing a basic metrology board, defining mounting holes therein for mating with said baseplate mounting posts for support of said basic metrology board within said casing in a predetermined relationship with said baseplate;

receiving a plurality of resilient connectors situated within said casing and electrically connecting between said basic metrology board and said spades so that said basic metrology board is connected for producing a signal indicating electricity consumption at the junction box receptacle with which said electricity meter is associated;

situating a circuit board within said casing and electrically connected with said basic metrology board, said circuit board providing selected customized features for said electricity meter beyond said basic metrology board electricity consumption signal;

including a common power supply received within said casing for providing power to both said basic metrology board and said circuit board;

extending a fixed connector between said basic metrology board and said circuit board, for at least partially mechanically supporting said circuit board, said fixed connector including multiple respective conductors for carrying between said basic metrology board and said circuit board both data from said respective boards and power from said common power supply;

including a support chassis, defining mounting holes therein for mating with said baseplate mounting posts for support of said chassis within said casing in a predetermined relationship with said baseplate;

mounting a meter display in snap fit arrangement supported in fixed relation to said support chassis;

electrically associating a coil with said spades and physically supported in predetermined relationship to said baseplate; and

associating a Hall Effect sensor with said basic metrology board and situated in a predetermined position relatively adjacent said coil for electrical sensing interaction therewith, said predetermined position being formed in part by said predetermined relationship between said baseplate and said basic metrology board;

whereby such methodology for providing such a modular electricity meter establishes predetermined

spatial relationships between selected alternative components using snap fit and interlocking arrangements established from said common baseplate.

70. Methodology for a modular electricity meter as in claim 69, wherein said meter display comprises one of an electronic meter display and a mechanical based meter display.

71. Methodology for a modular electricity meter as in claim 69, wherein said resilient connectors comprise a plurality of cantilevered spring connector elements, and said meter further includes welding said baseplate and said basic metrology board to one another in said predetermined relationship thereof.

72. Methodology for a modular electricity meter as in claim 69, including further providing an at least partially transparent outer cover received over said inner cover for protection of components within said casing, and so that said meter display is visible therethrough.

73. Methodology for a modular electricity meter as in claim 69, wherein said baseplate mounting posts are tapered, and said mounting holes of said basic metrology board and said support chassis are commonly received thereover but are provided with respectively different sets of diameters so that said basic metrology board and said support chassis are selectively separated from one another along the axial length of said baseplate tapered mounting posts.

74. Methodology for a modular electricity meter as in claim 69, including further providing an antenna directly incorporated into one of said basic metrology board and said circuit board for transmitting through said inner cover a radio signal indicating data from at least one of said boards.

75. Methodology for a modular electricity meter as in claim 69, including further providing:

a light source supported on said basic metrology board and indicative of said signal therefrom; and

a light pipe supported on said support chassis and positioned relative to said basic metrology board so as to carry light from said light source to outside said casing.

76. Methodology for a modular electricity meter as in claim 69, including further providing a main circuit supported on said baseplate and defining an initial opening therein for calibration access to said basic metrology board and said circuit board during assembly of said electricity meter.

77. Methodology for a modular electricity meter as in claim 76, including further providing a nonremovable bridge clip received in said main circuit initial opening for providing a tamper proof circuit bridge closure to said opening.

78. Methodology for a modular electricity meter as in claim 77, wherein said bridge clip further includes exposed terminals to provide continued access to said main circuit for field testing of said electricity meter after assembly thereof.

79. Methodology for a modular electricity meter as in claim 69, including further providing additional output of data from at least one of said basic metrology board and said circuit board using at least one of hardwired transmissions, radio frequency transmissions, pulse outputs, optical link outputs, modem telephone line transmissions and wireless telephone transmissions.